M05-1071

TOP EL. OF TEMPORARY STANDPIPE AND RESERVOIR & ABOVE NOZZLE FLANGE FACE TO BE 23 1/2 ± 1/2

TEMPORARY STANDPIPE SEE NOTE 3

TO SRV ADS LOGIC

VENT & HEAD SPRAY SEE M05-1079-2

MANHOLE

REFUELING SEAL

DRYWELL

DRYWELL SUMP

TO PT 1E32-N058

TO 'TR' 1B21-R614

RX RECIRC LOGIC

SIGNAL FROM ONE 'TE' ON EACH ELEVATION

LP DRAIN

WATER TIGHT JUNCTION BOX

WATER TIGHT JUNCTION BOX

NOTES:

1. ALL DIVISION 2 'LY' & 'PY' LOCATED ON PANEL 1H13-P662 UNLESS OTHERWISE NOTED.
2. ALL DIVISION 4 'LY' & 'PY' LOCATED ON PANEL 1H13-P664, UNLESS OTHERWISE NOTED.
3. DURING PERIODS WHEN THE REACTOR VESSEL HEAD AND UPPER RANGE LEVEL CONDENSING CHAMBER 1B21-D002 ARE REMOVED, A TEMPORARY STANDPIPE WITH MEANS FOR LOCALLY CHECKING WATER LEVEL SHALL BE PROVIDED TO TAKE THE PLACE OF THE CONDENSING CHAMBER.
4. LOCK OPEN TO PREVENT PRESSURIZATION BY THE KEEP-FILL SYSTEM (MOD NB-031, NRC I.N. 93-89)

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

CLINTON POWER STATION
FINAL SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-NUCLEAR BOILER
SHEET 56 OF 111

REVISION 20
OCTOBER 2018

REV. 20

1B33C001A
REACTOR RECIRCULATION
PUMP 1A
K-2801

1B33-D003A
HYDRAULIC POWER UNIT
K-2801

1B13-D003
REACTOR PRESSURE VESSEL
K-2801

M05-1072

ISOLATION SIGNAL

REACTOR SAMPLE STATION 1G33-Z020

EQUIP. DRAIN

DRYWELL FLOOR DRAIN

DRYWELL EQUIP SUMP

REACTOR WTR CLEAN-UP

LEAK DETECTION

CONDENSER PRESSURE

CIRC. WATER PUMPS

TO RECIRC. PUMP 1A FLOW CONTROL

DRYWELL EQUIP. SUMP

PUMP A INTERLOCK

H.P. VENT

SEAL LEAK DETECTION

SEAL STAGING LINE

NO.2 SEAL CAVITY

NO.1 SEAL CAVITY

DECON. CONN.

CONTROL ROD DRIVE

RWCU PUMPS

DRYWELL EQUIP DRAIN SUMP

DRYWELL FLOOR DRAIN

CIRCULATION UNIT #

L.P. DRAIN

FROM RECIRC. PUMP 1A FLOW CONTROL LOGIC

NOTES:

1. FOR FLANGE SIZE AND RATING SEE G.E. DWG. VPF5205-258
2. CIRCULATION UNIT TO BE MOUNTED AT HIGH POINT OF HYDRAULIC SYSTEM PIPING.
3. FOR SPECIFIC HYDRAULIC EQUIPMENT INSTALLATION AND ROUTING REQUIREMENTS SEE G.E. DOC. 22A460T.

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-3272 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1

DIVISIONAL SEPARATION AND HIGH-ENERGY P & ID'S-- REACTOR RECIRCULATION SHEET 57 OF 111

REVISION 8
AUGUST 1999

M05-1072

1B13-D003
REACTOR PRESSURE VESSEL
K-2801

1B33-D003B
HYDRAULIC POWER UNIT 1B
K-2801

1B33C001B
REACTOR RECIRCULATION
PUMP 1B
K-2801

1B13-D005

1B33-D003B

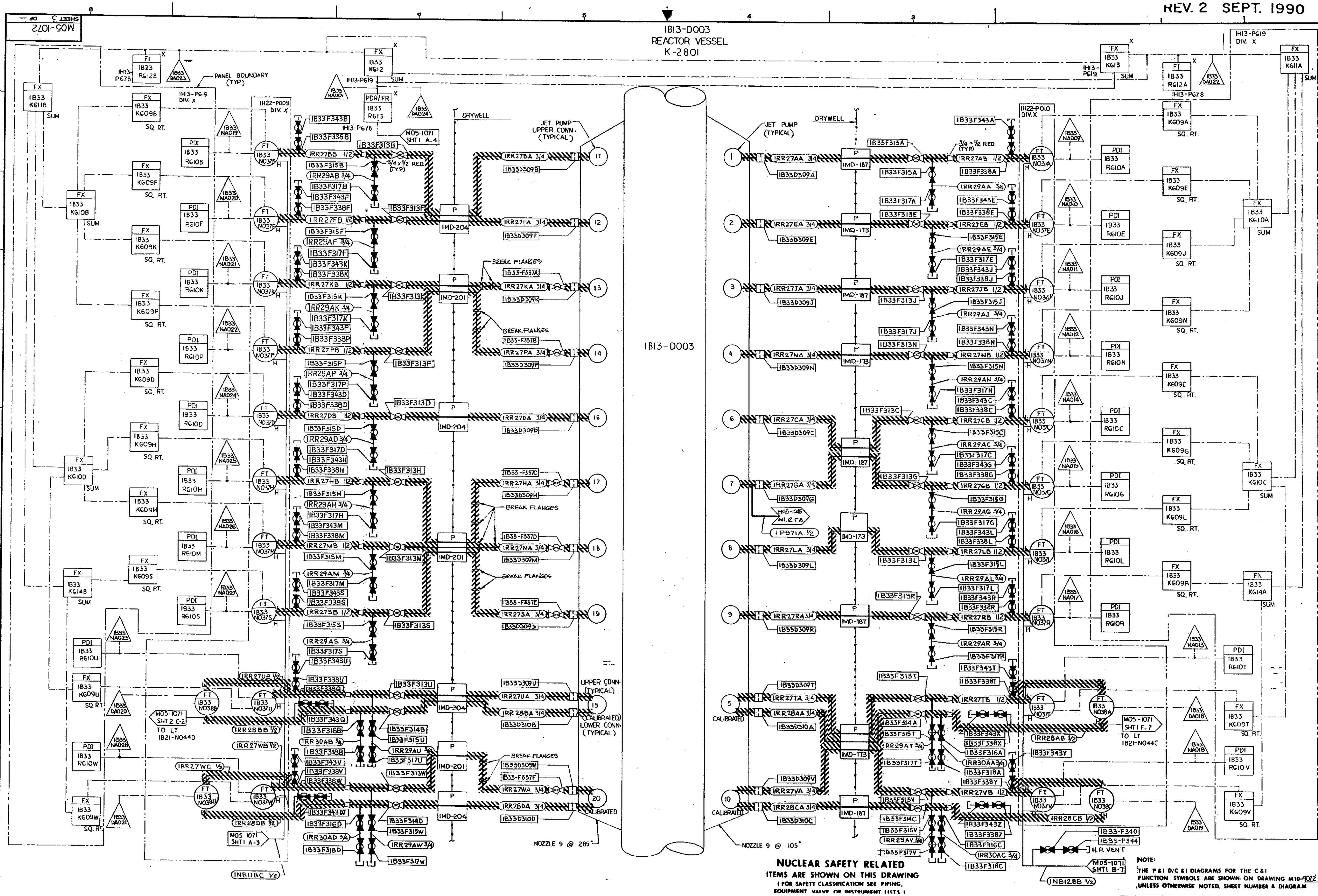
FOR NOTES SEE SHT 1

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-0172 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM.

CLINTON POWER STATION**
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
REACTOR RECIRCULATION
SHEET 68 OF 111



CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
REACTOR RECIRCULATION
SHEET 59 OF 111

REVISION 18
OCTOBER 2016

M05-1073

1E21C001
L.P CORE SPRAY PUMP
K-2801

1E21C002
WATER LEG PUMP
K-2826B

1E12D331
ECCS SUCTION STRAINER
K-2888B

1B13D003
REACTOR PRESSURE
VESSEL
K-2801

RELIEF VALVE DATA				
VALVE NUMBER	MAKE & TYPE	SIZE	VALVE SET PRESSURE	CAPACITY
1E21F018	DRESSER-1-92-1970-2(51-3-23-XFA19-NC3007	1½ x 2	554 PSIG	100 GPM
1E21F031	DRESSER-1-1970-2(3-1-1-23 XFA31-NC3007	1 x 1½	100 PSIG	310 GPM

FIELD NOTES.

1. BLIND SPECTACLE FLANGE TO BE IN PLACE EXCEPT DURING LPCS PUMP TEST DURING REACTOR SHUTDOWN LINE TO BE BLIND FLANGED DURING NORMAL PLANT OPERATIONS.
2. VALVE 1E21F012 SHALL BE INSTALLED WITH THE PACKING GLAND UPSTREAM OF THE DISC.
3. TEMPORARY INLINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP. & INITIAL START UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINE AS SHOWN.
4. FOR LPCS LOGIC SEE GE DWG 826153.
5. FOR ADS LOGIC SEE GE DWG 826151.
6. RESTRICTING ORIFICE SIZES INDICATED ARE FOR INITIAL SYSTEM START UP ONLY. ADJUST AS NECESSARY TO MEET HYDRAULIC REQUIREMENTS.
7. BLIND FLANGE FOR HYDROSTATIC PRESSURE TEST ONLY. REMOVE FOR NORMAL PLANT OPERATION

ENGINEERING NOTES:

1. CHECK VALVE E21-F003 SHALL BE LOCATED BELOW SUPPRESSION POOL L.W.L. 730'-11"
2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT WALL SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC VALVE LOCATION SHOULD EASILY ACCOMODATE THIS MANUAL TESTING.
4. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE WITH CONSIDERATION FOR ISI ACCESS.
5. EQUALIZING VALVE IS OPENED BY ENERGIZING THE AIR SOLENOID LOCALLY.
6. THE PIPING FROM AND INCLUDING GATE VALVE 1E21F371 TO CHECK VALVE 1E21F033 AND FROM AND INCLUDING GATE VALVE 1E21F372 TO CHECK VALVE 1E12F084A (M05-1075-001) MUST BE PER PDT 305CP TO MEET ASME NC-3612.4(a)(1).

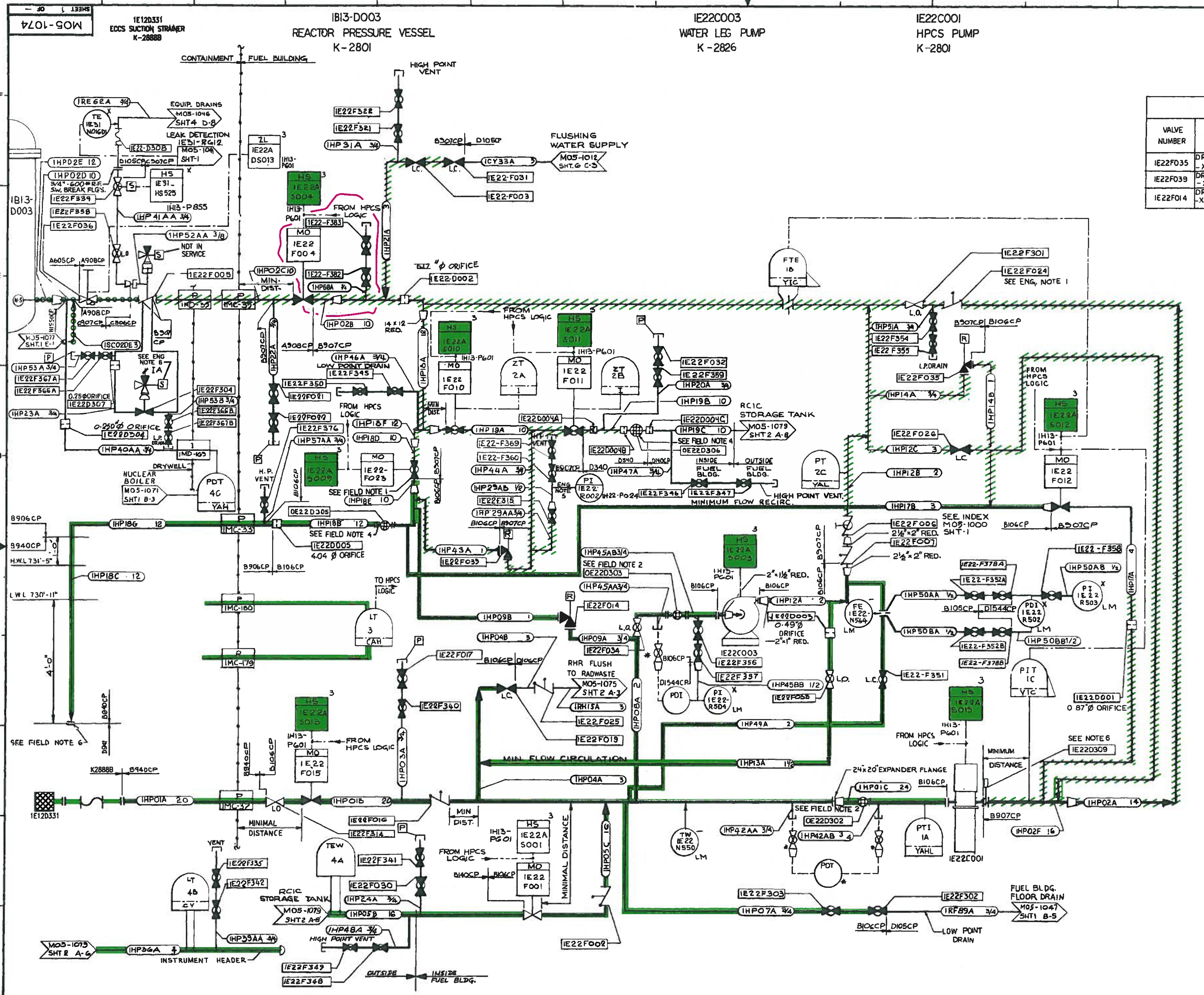
NOTE:
THE P & I D/C & I DETAILS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9075 UNLESS OTHERWISE NOTED. SHEET NUMBER & DETAIL REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

NUCLEAR SAFETY RELATED ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
LOW-PRESSURE CORE SPRAY (LPCS)
SHEET 60 OF 111

REVISION 14
JANUARY 2011



RELIEF VALVE DATA					
VALVE NUMBER	MAKE & TYPE	SIZE	VALVE SET PRESSURE	BLOW DOWN (PSI)	CAPACITY
1E22F035	DRESSER 3/4-1970-2(3-1-1-2) -XFA55-NC 3007	3/4"x1"	1560 PSIG.	FIXED	68 GPM.
1E22F039	DRESSER 3/4-1975-3(3-1-1-2) -XFA50-NC3007	3/4"x1"	1560 PSIG.	FIXED	10 GPM
1E22F014	DRESSER 3/4-1975-3(3-1-1-2) -XFA49-NC3007	3/4"x1"	100 PSIG	FIXED	10 GPM

ENGINEERING NOTES:

1. CHECK VALVE 1E22-F024 SHALL BE LOCATED AT AN ELEVATION BELOW THE SUPPRESSION POOL LOW WATER LEVEL (730'-11").
2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMMODATE THIS MANUAL TESTING.
4. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE, WITH CONSIDERATION FOR ISI ACCESS.
5. 1E22-R002 IS ABANDONED IN PLACE SEE FDDR LH1-4162-1 FOR DETAILS.
6. EQUALIZING VALVE IS OPENED BY ENERGIZING THE AIR SOLENDID LOCALLY.

FIELD NOTES:

1. VALVE 1E22F023 SHALL BE INSTALLED WITH THE PACKING GLAND ON THE UPSTREAM SIDE OF THE VALVE DISC.
2. TEMPORARY INLINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP & INITIAL START UP TESTING ONLY. (SEE S&L STD. MF-270.9.1) REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINES AS SHOWN.
3. FOR HPCS LOGIC SEE GE DWG. 828E314-
4. SPOOL PIECE FOR TEMPORARY IN LINE STRAINER FOR PRE-OP & INITIAL START UP TESTING ONLY. REMOVE STRAINER FOR NORMAL PLANT OPERATION.
5. RESTRICTING ORIFICE SIZES INDICATED ARE FOR INITIAL SYSTEM START UP ONLY. ADJUST AS NECESSARY TO MEET HYDRAULIC REQUIREMENTS.
6. BLIND FLANGE FOR HYDROSTATIC PRESSURE TEST ONLY. REMOVE FOR NORMAL PLANT OPERATION.

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE

THE P&I D/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9074 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-HIGH-PRESSURE CORE SPRAY
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MARCH 2020

SHEET 1 OF —
M05-1075

1E12C002A
RHR PUMP 1A
K2801

1E12D331
ECCS SUCTION STRAINER
K-2888B

1B13D003
REACTOR PRESSURE VESSEL
K-2801

RELIEF VALVE DATA				
VALVE NUMBER	DATA SHT NO	SIZE	VALVE SET PRESSURE	CAPACITY GPM
1E12F025A	RV-004A	1 1/2"x1"	477 PSIG	65 GPM
1E12F017A	RV-003A	1 1/2"x2"	200 PSIG	43 GPM
1E12F005	RV-003C	1 1/2"x2"	178 PSIG	40 GPM

FIELD NOTES:

1. VALVES 1E12F011A & 1E12F011B SHALL BE INSTALLED WITH PACKING GLANDS ON UPSTREAM SIDE OF DISC.
2. TEMPORARY INLINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP. & INITIAL START UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINES AS SHOWN. (SEE S & L STANDARD MF-270.9.1)
3. SPOOL PIECE FOR TEMPORARY INLINE STRAINER FOR PRE-OP & INITIAL START-UP TESTING ONLY. REMOVE STRAINER FOR NORMAL PLANT OPERATION. (REMOVED)
4. FOR RHR LOGIC SEE G.E. DWG. 828E304. FOR NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM (NSSSS) LOGIC SEE G.E. DWG. 828E151.
5. INDICATED ORIFICE SIZES ARE FOR INITIAL-START UP & TESTING ONLY. FOR NORMAL OPERATION ADJUST AS REQUIRED TO MEET THE HYDRAULIC REQUIRMENTS OF THE SYSTEM.
6. BLIND FLANGES FOR HYDROSTATIC PRESSURE TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION.
7. SEE MECH. DEPT. PIPING SPECIALTY LIST.

ENGINEERING NOTES:

1. CHECK VALVES 1E12F031A & 1E12F031B & 1E12F031C SHALL BE LOCATED AT ELEVATION BELOW THE SUPPRESSION POOL LOW WATER LEVEL (730'-11")
2. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
3. ALL CHECK VALVES EXTERIOR TO THE CONTAINMENT SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMODATE THIS MANUAL TESTING.
4. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE WITH CONSIDERATION GIVEN FOR ISI ACCESS.
5. DISCHARGE LINES FROM RELIEF VALVES 1E12F055A & 1E12-F055B SHALL NOT SLOPE UPWARD SUCH THAT WATER POCKETS EXIST.
6. STEAM INLET PIPING SHOULD SLOPE DOWNWARD CONTINUOUSLY FROM VALVES 1E12F052A & 1E12F052B TO HEAT EXCHANGERS.
7. • FURNISHED WITH ASSOCIATED EQUIPMENT.
8. ALL HIGH POINT VENTS SHALL BE TAPPED AT THE TOP OF THE PROCESS PIPE. ALL LOW POINT DRAINS SHALL BE TAPPED AT THE BOTTOM OF THE PROCESS PIPE.
9. SOCKET WELD CONNECTION TO BE PROVIDED FOR 1½" MALE PIPE END OF DOUBLE BLOCK VALVE.
10. EQUALIZING VALVES ARE OPENED BY ENERGIZING THE AIR SOLENOID LOCALLY.
11. THE PIPING FROM AND INCLUDING GATE VALVE 1E12F531 TO CHECK VALVE 1E12F084B, FROM AND INCLUDING GATE VALVE 1E12F532 TO CHECK VALVE 1E12F084C, AND FROM AND INCLUDING GATE VALVE 1E21F372 (M05-1073, SHT.001) TO CHECK VALVE 1E12F084A MUST BE PER PDT 305CP TO MEET ASME NC-3612.4(a)(1) WHEN THE GATE VALVE IS CLOSED.

REV.21

REV.21

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-0075 UNLESS NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

DO NOT WRITE IN 0 OR X FOR REVISION

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
RESIDUAL HEAT REMOVAL
SHEET 62 OF 111

REVISION 20
OCTOBER 2018

IB13-D003
REACTOR PRESSURE VESSEL
K-2801

1E12C002B
RHR PUMP 1B
K-2801

1E12D331
ECCA SUCTION STRAINER
K-2888B

RELIEF VALVE DATA

VALVE NUMBER	MAKE & TYPE	SIZE (IN.)	VALVE SET PRESSURE	CAPACITY GPM.
1E12F025B	DRESSER-1-1970-2(3-1-1-2) -XFA32 - NC3007	½ X 1	484 PSIG.	66 GPM.
1E12F030	DRESSER-1-1970-2(3-1-1-2) -XFA32 - NC3007	½ X 1	197 PSIG.	42 GPM.
1E12F017B	DRESSER-1½-1970-2(3-1-1-2) -XFA32 - NC3007	½ X 2	200 PSIG.	43 GPM.

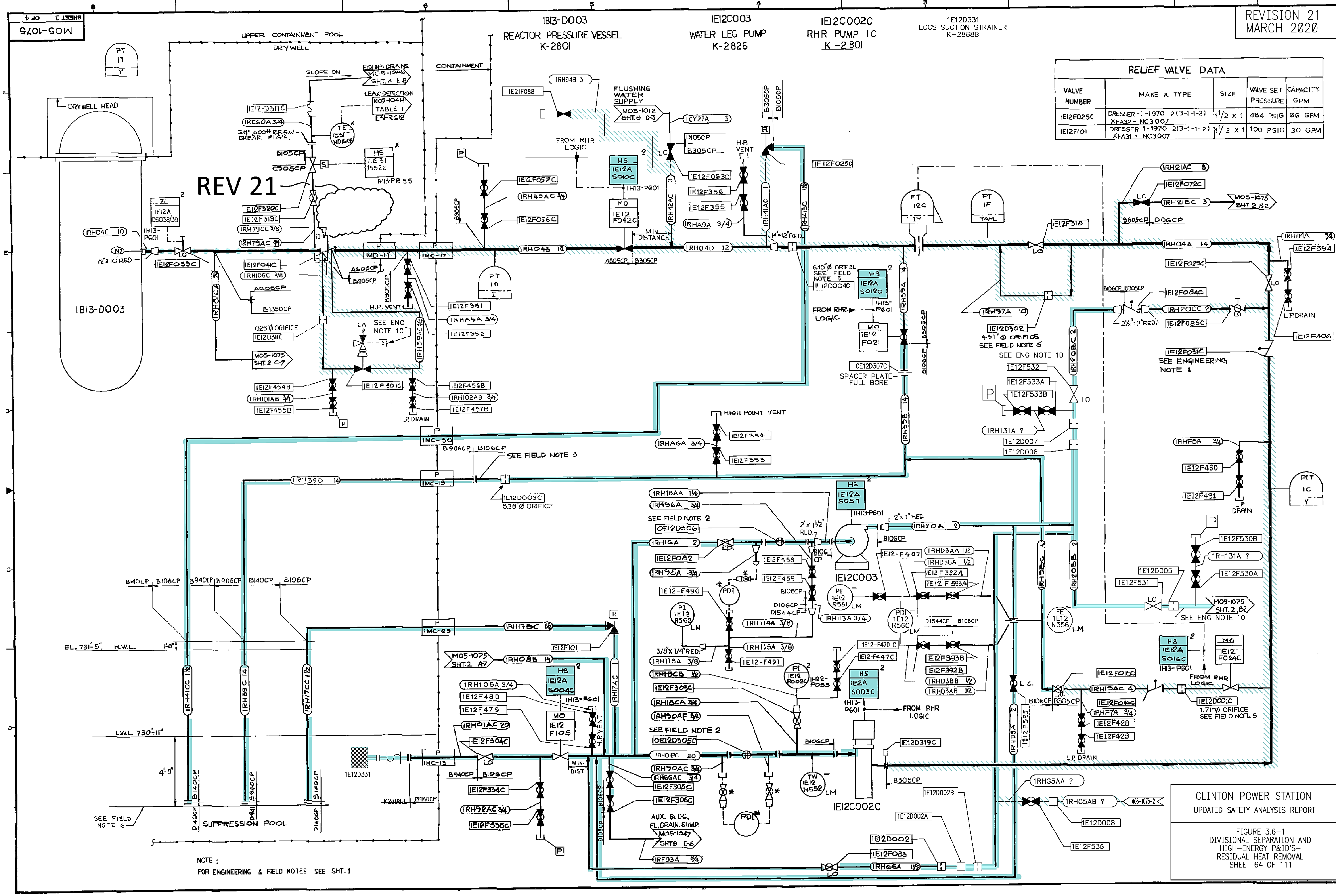
NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9075 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

REV.20

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S
RESIDUAL HEAT REMOVAL
SHEET 63 OF 111

REVISION 21
MARCH 2020



RELIEF VALVE DATA

VALVE NUMBER	MAKE & TYPE	SIZE	VALVE SET PRESSURE	CAPACITY GPM
1E12F025C	DRESSER-1-1970-2(3-1-1-2) XFA32- NC3007	1 1/2 X 1	484 PSIG	66 GPM
1E12F101	DRESSER-1-1970-2(3-1-1-2) XFA31- NC3007	1 1/2 X 1	100 PSIG	30 GPM

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
RESIDUAL HEAT REMOVAL
SHEET 64 OF 111

REVISION 12
JANUARY 2007

1E12B001B
RHR HEAT EXCHANGER
K-2801

1E12B001A
RHR HEAT EXCHANGER
K-2801

SHUT DOWN SERVICE WATER
M05-1052 SHT. 2 E-1

SUPPRESSION POOL
M05-1075 SHT. 2 B-6

RCIC TURB. EXHAUST VACUUM BREAKER
M05-1079 SHT. 1 C-6

AUX. BLDG. FL. & EQUIP. DRAIN SUMP
M05-1047 SHT. 5 C-5

PROCESS SAMPLE PANEL 1PL33J
M05-1045 SHT. 7 E-4

FROM RHR LOGIC

SEE ENGINEERING NOTE 5

12 SIMILAR LINES 1RH67BN 3/4 TO 1RH67BZ 3/4 (BO EXCLUDED)

12 SIMILAR LINES IRH67BA 3/4 TO IRH67BM 3/4 (B1 EXCLUDED)

12 SIMILAR LINES IRH67AA 3/4" TO IRH67AM 3/4" (AI EXCLUDED)

12 SIMILAR LINES IRH67AN 3/4 TO IRH67AZ 3/4" (AO EXCLUDED)

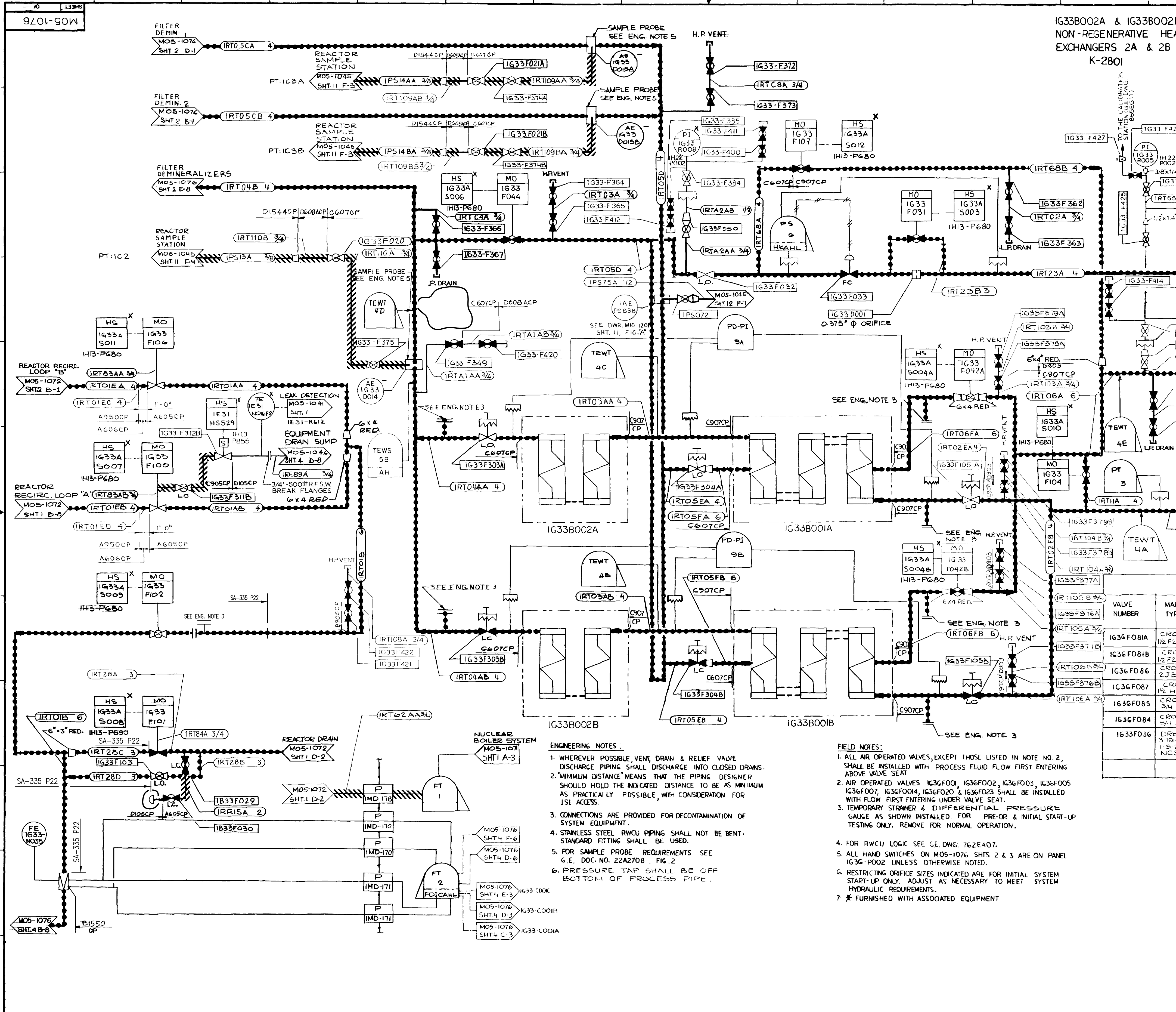
RELIEF VALVE DATA				
VALVE NUMBER	MAKE & TYPE	SIZE (IN.)	VALVE SET PRESSURE	CAPACITY
1E12F055A	CROSBY DS-C-64332	12 X 8	**	
1E12F055B	CROSBY DS-C-64332	12 X 8	**	
1E12F036	DRESSER 4-19101-1(1-1-3-2) -10IC3007	6 X 4	68 PSIG	374 GPM
1E12F112A	----------	1 X 2	474 PSIG	>6 GPM
1E12F112B	----------	1 X 2	474 PSIG	>6 GPM

** SHUT BY RAISING RELIEF SETPOINT

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH ENERGY P & ID'S - RESIDUAL HEAT REMOVAL
(SHEET 65 OF 111)

REVISION 16
JANUARY 2014



ENGINEERING NOTES:

1. WHEREVER POSSIBLE, VENT, DRAIN & RELIEF VALVE DISCHARGE PIPING SHALL DISCHARGE INTO CLOSED DRAINS.
2. "MINIMUM DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMUM AS PRACTICALLY POSSIBLE, WITH CONSIDERATION FOR ISI ACCESS.
3. CONNECTIONS ARE PROVIDED FOR DECONTAMINATION OF SYSTEM EQUIPMENT.
4. STAINLESS STEEL RWCU PIPING SHALL NOT BE BENT. STANDARD FITTING SHALL BE USED.
5. FOR SAMPLE PROBE REQUIREMENTS SEE G.E. DOC. NO. 22A2708 . FIG. 2
6. PRESSURE TAP SHALL BE OFF BOTTOM OF PROCESS PIPE.

FIELD NOTES:

1. ALL AIR OPERATED VALVES, EXCEPT THOSE LISTED IN NOTE NO. 2, SHALL BE INSTALLED WITH PROCESS FLUID FLOW FIRST ENTERING ABOVE VALVE SEAT.
2. AIR OPERATED VALVES 1G36F001, 1G36F002, 1G36F003, 1G36F005 1G36F007, 1G36F0014, 1G36F020 & 1G36F023 SHALL BE INSTALLED WITH FLOW FIRST ENTERING UNDER VALVE SEAT.
3. TEMPORARY STRAINER & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED FOR PRE-OP & INITIAL START-UP TESTING ONLY. REMOVE FOR NORMAL OPERATION.
4. FOR RWCU LOGIC SEE G.E. DWG. 762E407.
5. ALL HAND SWITCHES ON M05-1076 SHTS 2 & 3 ARE ON PANEL 1G36-P002 UNLESS OTHERWISE NOTED.
6. RESTRICTING ORIFICE SIZES INDICATED ARE FOR INITIAL SYSTEM START-UP ONLY. ADJUST AS NECESSARY TO MEET SYSTEM HYDRAULIC REQUIREMENTS.
7. ✱ FURNISHED WITH ASSOCIATED EQUIPMENT

RELIEF VALVE DATA

VALVE NUMBER	MAKE & TYPE	SIZE (INCHES)	VALVE SET (PSIG)
1G36F081A	CROSBY 1½ F2 JO-45WR	1½ X 2	1410
1G36F081B	CROSBY 1½ F2 JO-45WR	1½ X 2	1410
1G36F086	CROSBY 2J3 JO-25	2 X 3	150
1G36F087	CROSBY 1½ H3 JO-25	1½ X 3	150
1G36F085	CROSBY 3/4 JO-25	3 X 4	150
1G36F084	CROSBY 3/4 JO-25	3 X 4	150
1G33F036	DRESSER 3-1910K-1(1-1-3-2)-XFA8 NC3007	3 X 4	150

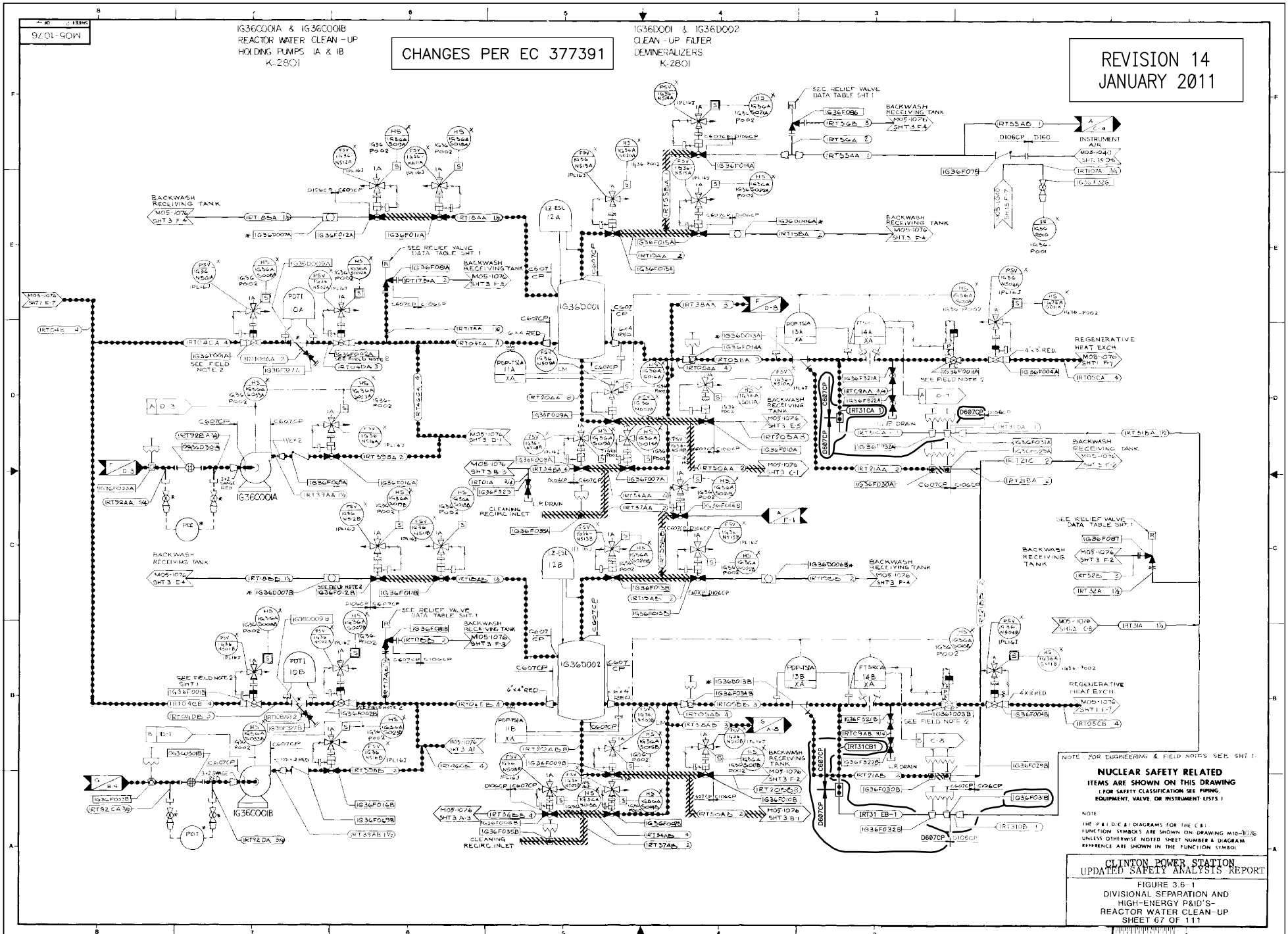
NUCLEAR SAFETY RELATED
TEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:

THE P&I D/C &I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9076 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
FINAL SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
REACTOR WATER CLEAN-UP
SHEET 66 OF 111


M05-1076
IG36C001A & IG36C001B
REACTOR WATER CLEAN-UP
HOLDING PUMPS 1A & 1B
K-2801
CHANGES PER EC 377391
IG36D001 & IG36D002
CLEAN-UP FILTER
DEMINERALIZERS
K-2801
REVISION 14
JANUARY 2011
IG36D001
IG36D002
IG36C001A
IG36C001B
BACKWASH RECEIVING TANK
REGENERATIVE HEAT EXCH.
INSTRUMENT AIR
CLEANING RECIRC INLET
L.P. DRAIN
SEE RELIEF VALVE DATA TABLE SHT 1
NOTE: FOR ENGINEERING & FIELD NOTES SEE SHT 1.
NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS)
NOTE
THE P & I D/C & T DIAGRAMS FOR THE C & T FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1076 UNLESS NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL
CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT
FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
REACTOR WATER CLEAN-UP
SHEET 67 OF 111

IG36C002 PRE-COAT PUMP K-2801

IG36A001 PRE-COAT TANK K-2801

IG36A002 RESIN FEED TANK K-2801

IG36C003 RESIN METERING PUMP K-2801

IG36A003 BACKWASH RECEIVING TANK K-2801

IG36A003

IG36A001

IG36A002

IG36-C002

DUST COLLECTOR

PRE-COAT AGITATOR

RESIN AGITATOR *

MILLIPORE FILTER HOLDER

CONTAINMENT BLDG. FLOOR DRAINS

RWCU FILT/DEMIN. BACKWASH TANK PUMPS

CYCLED CONDENSATE

CONT. BLDG. EXHAUST SYSTEM

BACKWASH RECEIVING TANK

FILTER/DEMINERALIZER VESSEL PRECOAT PIPE LINE

CLEANING RECIRC OUTLET

SEE RELIEF VALVE DATA TABLE SHT. 1

SEE FIELD NOTE 3 SHT 1

SEE FIELD NOTE 2

4"x3" RED.

3"x2" RED.

3"x4" RED.

¾ x ⅜ RED.

I.P. DRAIN

L.P. DRAIN

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE: FOR ENGINEERING & FIELD NOTES SEE SHT. 1

NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9076, UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

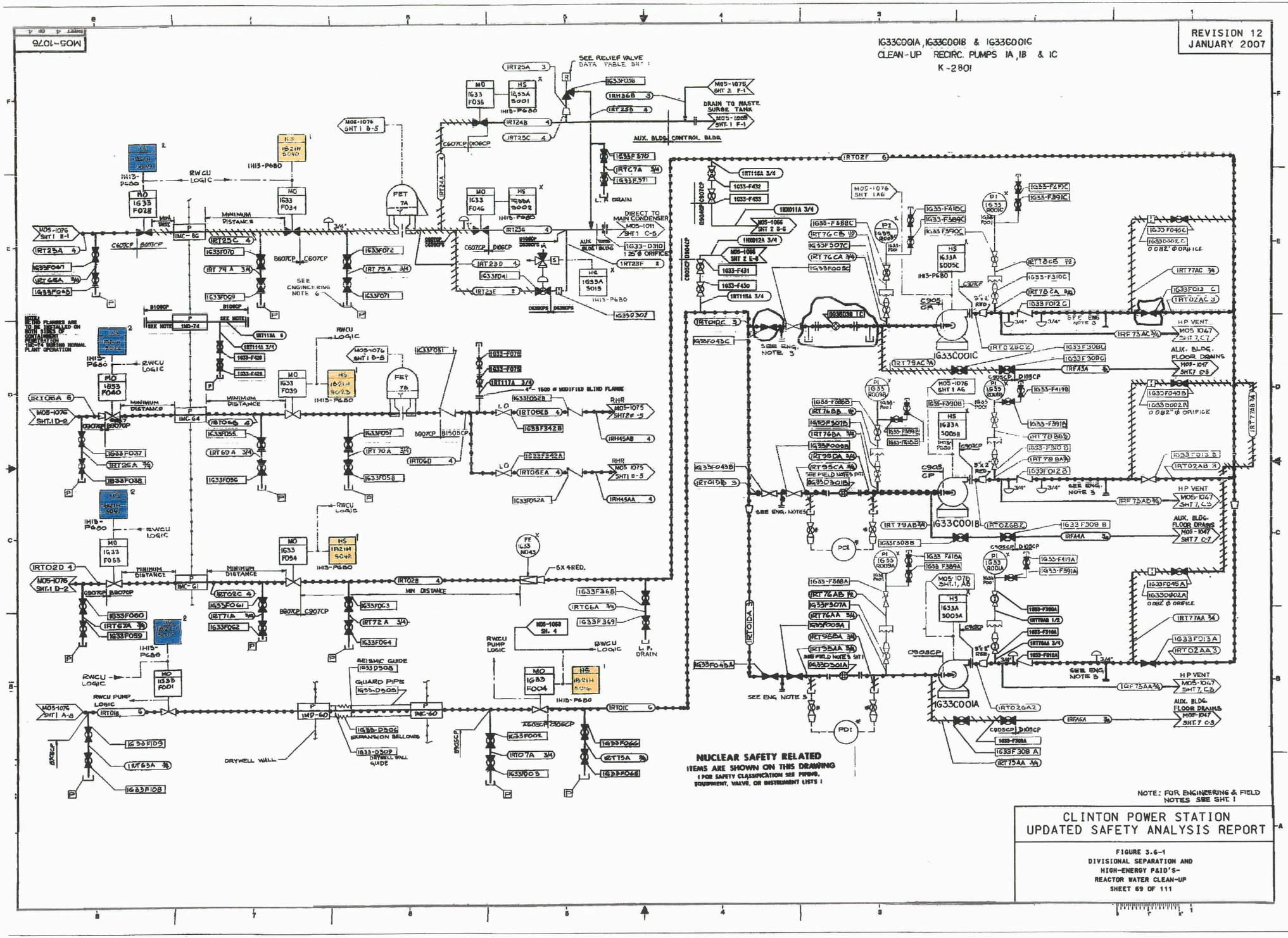
CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
REACTOR WATER CLEAN-UP
SHEET 68 OF 111

REVISION 12
JANUARY 2007

IG33C001A, IG33C001B & IG33C001C
CLEAN-UP RECIRC. PUMPS 1A, 1B & 1C
K-280!

MO5-1076



CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
REACTOR WATER CLEAN-UP
SHEET 69 OF 111

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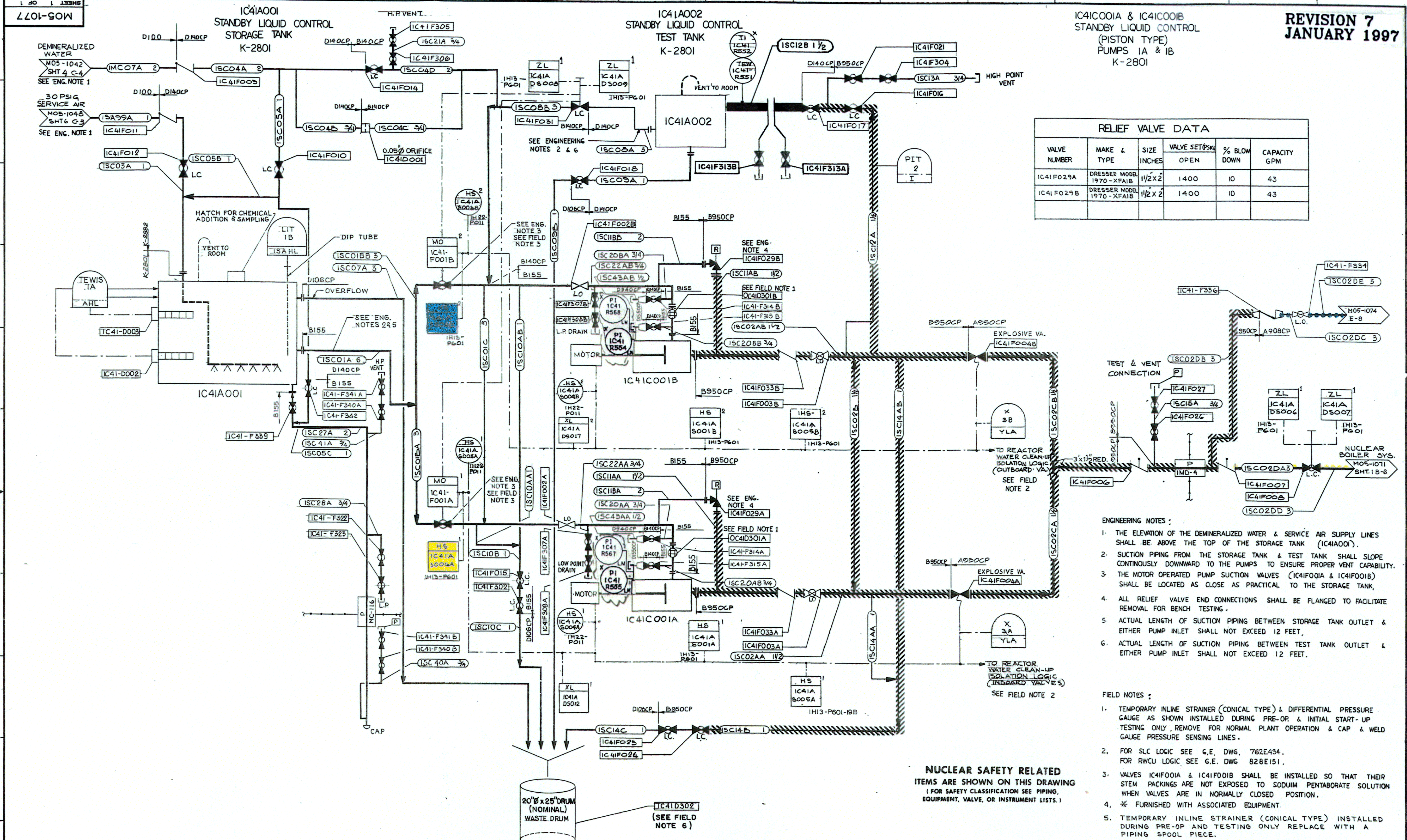


REVISION 7
JANUARY 1997

RELIEF VALVE DATA

VALVE NUMBER	MAKE & TYPE	SIZE INCHES	VALVE SET (PSIG) OPEN	% BLOW DOWN	CAPACITY GPM
IC41F029A	DRESSER MODEL 1970-XFA1B	1½ x 2	1400	10	43
IC41F029B	DRESSER MODEL 1970-XFA1B	1½ x 2	1400	10	43

ENGINEERING NOTES:

1. THE ELEVATION OF THE DEMINERALIZED WATER & SERVICE AIR SUPPLY LINES SHALL BE ABOVE THE TOP OF THE STORAGE TANK (IC41A001).
2. SUCTION PIPING FROM THE STORAGE TANK & TEST TANK SHALL SLOPE CONTINOUSLY DOWNWARD TO THE PUMPS TO ENSURE PROPER VENT CAPABILITY.
3. THE MOTOR OPERATED PUMP SUCTION VALVES (IC41F001A & IC41F001B) SHALL BE LOCATED AS CLOSE AS PRACTICAL TO THE STORAGE TANK.
4. ALL RELIEF VALVE END CONNECTIONS SHALL BE FLANGED TO FACILITATE REMOVAL FOR BENCH TESTING.
5. ACTUAL LENGTH OF SUCTION PIPING BETWEEN STORAGE TANK OUTLET & EITHER PUMP INLET SHALL NOT EXCEED 12 FEET.
6. ACTUAL LENGTH OF SUCTION PIPING BETWEEN TEST TANK OUTLET & EITHER PUMP INLET SHALL NOT EXCEED 12 FEET.

FIELD NOTES:

1. TEMPORARY INLINE STRAINER (CONICAL TYPE) & DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP. & INITIAL START-UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION & CAP & WELD GAUGE PRESSURE SENSING LINES.
2. FOR SLC LOGIC SEE G.E. DWG. 762E434. FOR RWCU LOGIC SEE G.E. DWG 828E151.
3. VALVES IC41F001A & IC41F001B SHALL BE INSTALLED SO THAT THEIR STEM PACKINGS ARE NOT EXPOSED TO SODIUM PENTABORATE SOLUTION WHEN VALVES ARE IN NORMALLY CLOSED POSITION.
4. ✱ FURNISHED WITH ASSOCIATED EQUIPMENT
5. TEMPORARY INLINE STRAINER (CONICAL TYPE) INSTALLED DURING PRE-OP AND TESTING ONLY REPLACE WITH A PIPING SPOOL PIECE.
6. **AFTER EACH USE THE SLC WASTE DRUM SHALL BE DRAINED.**

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:
THE P&I D/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9077 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
STANDBY LIQUID CONTROL
SHEET 70 OF 111

REVISION 7
MAY 1997

M05-1078

SHEET 1 OF —

IC11D010A & IC11D010B
PUMP SUCTION FILTER
K-2801

IC11C001A & IC11C001B
DRIVE WATER PUMP
K-2801

IC11C300
RECIRCULATION PUMP
SEAL INJECTION PUMP
K-2882

IC11D003A & IC11D003B
DRIVE WATER FILTER
K-2801

CYCLED CONDENSATE STORAGE TANK
M05-1012 SHT 1 C-4

IC11C300

M05-1078 SHT. 3, G-2

MIN. DIST.

M05-1078 SHT. 2, C-16

CONTAINMENT

TYPICAL DETAIL SCRAM DISCHARGE VOLUME FLUSH

DRIVEWATER HEADER QUAD I

DRIVEWATER HEADER QUAD III

TO 1H22-P004 PANEL LT-1B21N095A (L)

TO 1H22-P027 PANEL LT-1B21N095B (L)

FIELD NOTES:

1. TEMPORARY IN-LINE STRAINER (CONICAL TYPE) AS SHOWN INSTALLED DURING PRE-OP AND INITIAL START-UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION.

ENGINEERING NOTES:

1. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
2. "MINIMAL DISTANCE" MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS MINIMAL AS PRACTICALLY POSSIBLE.
3. * MARKED ITEM IS FURNISHED WITH ASSOCIATED EQUIPMENT
4. USE MATCHING FLANGES IN ACCORDANCE WITH D1503CP.

RELIEF VALVE DATA

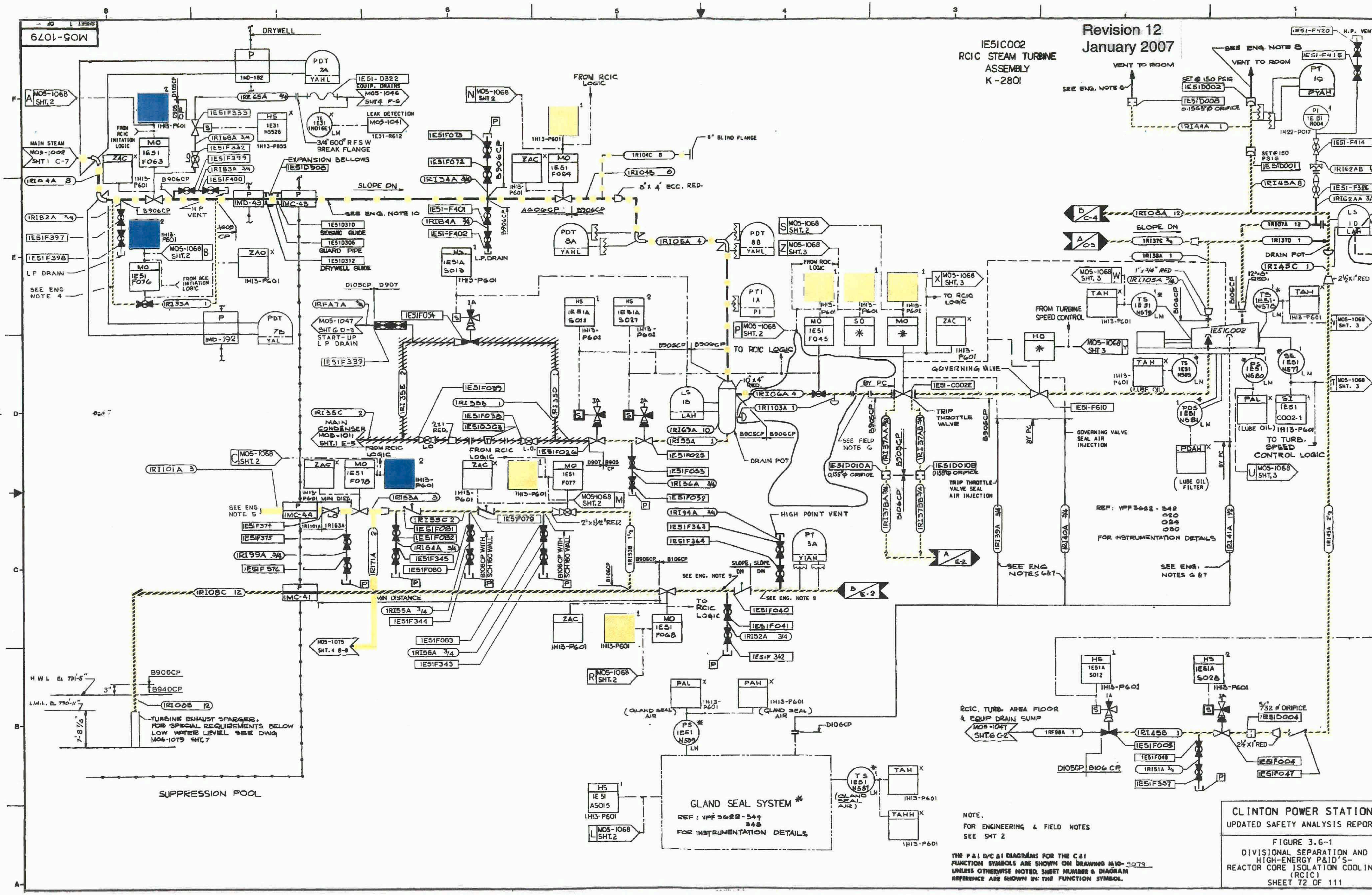
VALVE NUMBER	MAKE & TYPE	SIZE	VALVE SET PRESSURE	CAPACITY
IC11F001A	DRESSER-1-1970-2(3-1-1-2)-XFA30-NC3007	1"x1½"	150 PSIG	37 GPM
IC11F001B	DRESSER-1-1970-2(3-1-1-2)-XFA30-NC3007	1"x1½"	150 PSIG	37GPM
IC11F025A	CROSBY-JR-WR-S	¾"x¾"	1250 PSIG	10 GPM
IC11F025B	CROSBY-JR-WR-S	¾"x¾"	1250PSIG	10 GPM
IC11F351	DRESSER	¾"x1"	150 PSIG	10GPM
IC11F352	DRESSER	¾"x1"	1790PSIG	15 GPM

NUCLEAR SAFETY RELATED
ITEMS ARE SHOWN ON THIS DRAWING
(FOR SAFETY CLASSIFICATION SEE PIPING, EQUIPMENT, VALVE, OR INSTRUMENT LISTS.)

NOTE:
THE P&I D/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9078 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
CONTROL ROD DRIVES
SHEET 71 OF 111

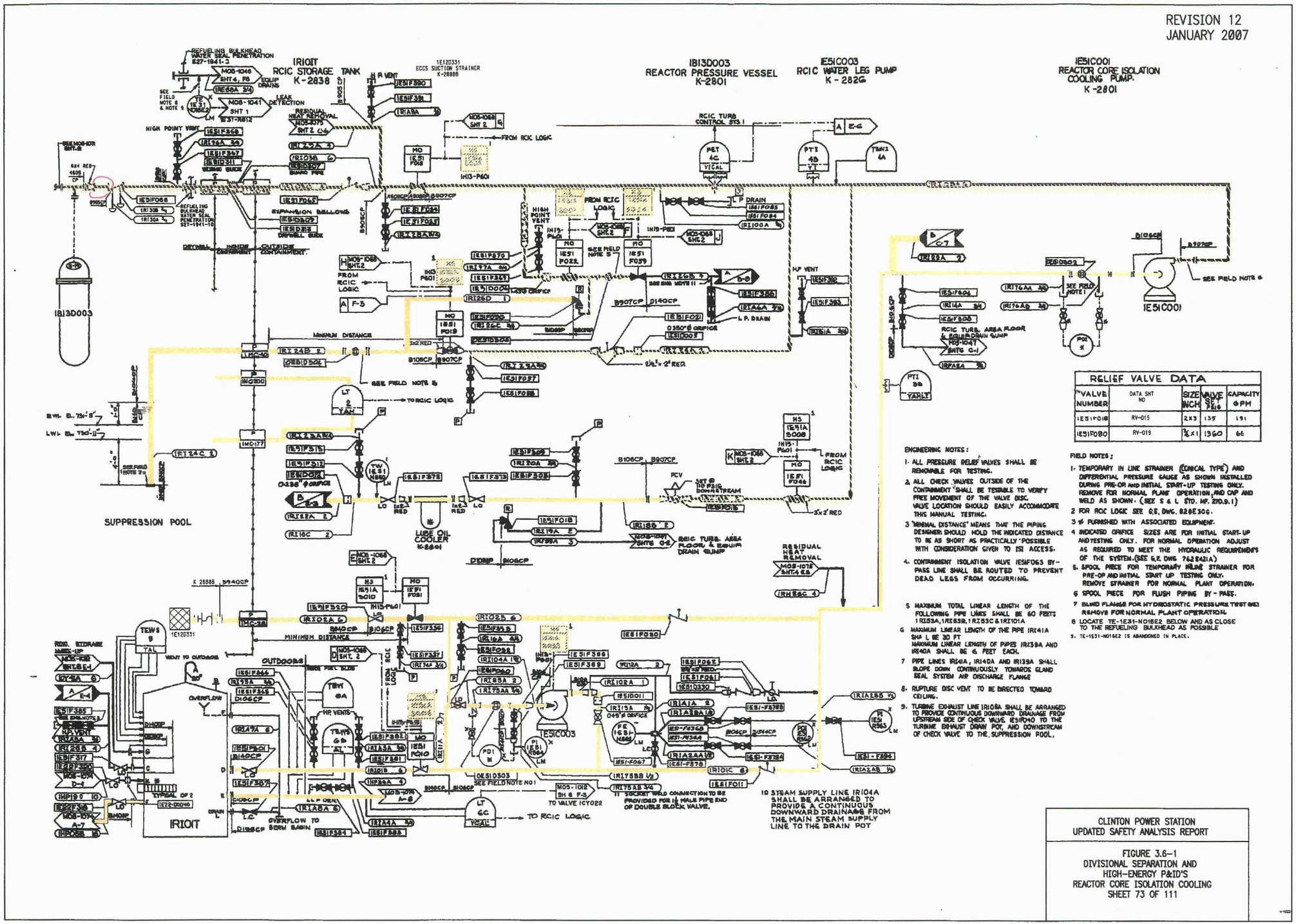


M05-1079
Revision 12
January 2007
1E51C002
RCIC STEAM TURBINE
ASSEMBLY
K-2801
DRYWELL
MAIN STEAM
EXPANSION BELLOWS
BREAK FLANGE
SLOPE DN
LEAK DETECTION
FROM RCIC LOGIC
8" BLIND FLANGE
SEISMIC GUIDE
GUARD PIPE
DRYWELL GUIDE
L.P. DRAIN
START-UP L P DRAIN
MAIN CONDENSER
TO RCIC LOGIC
DRAIN POT
HIGH POINT VENT
GOVERNING VALVE
TRIP THROTTLE VALVE
FROM TURBINE SPEED CONTROL
TO TURB. SPEED CONTROL LOGIC
GOVERNING VALVE SEAL AIR INJECTION
TRIP THROTTLE VALVE SEAL AIR INJECTION
FOR INSTRUMENTATION DETAILS
SEE ENG. NOTES 6 & 7
MIN DISTANCE
TURBINE EXHAUST SPARGER, FOR SPECIAL REQUIREMENTS BELOW LOW WATER LEVEL SEE DWG M06-1079 SHT.7
SUPPRESSION POOL
GLAND SEAL SYSTEM *
REF: VPF 3622-344 348
FOR INSTRUMENTATION DETAILS
RCIC. TURB. AREA FLOOR & EQUIP DRAIN SUMP
VENT TO ROOM
SEE ENG. NOTE 8
H.P. VENT
NOTE.
FOR ENGINEERING & FIELD NOTES SEE SHT 2
THE P&I D/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-3079 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S - REACTOR CORE ISOLATION COOLING (RCIC)
SHEET 72 OF 111

REVISION 12
JANUARY 2007



RELIEF VALVE DATA				
VALVE NUMBER	DATA SHT NO	SIZE INCH	VALVE SET PSIG	CAPACITY GPM
1E51F018	RV-015	2X3	135	191
1E51F080	RV-019	¾X1	1360	66

ENGINEERING NOTES:

1. ALL PRESSURE RELIEF VALVES SHALL BE REMOVABLE FOR TESTING.
2. ALL CHECK VALVES OUTSIDE OF THE CONTAINMENT SHALL BE TESTABLE TO VERIFY FREE MOVEMENT OF THE VALVE DISC. VALVE LOCATION SHOULD EASILY ACCOMMODATE THIS MANUAL TESTING.
3. 'MINIMAL DISTANCE' MEANS THAT THE PIPING DESIGNER SHOULD HOLD THE INDICATED DISTANCE TO BE AS SHORT AS PRACTICALLY POSSIBLE WITH CONSIDERATION GIVEN TO ISI ACCESS.
4. CONTAINMENT ISOLATION VALVE 1E51F063 BY-PASS LINE SHALL BE ROUTED TO PREVENT DEAD LEGS FROM OCCURRING.
5. MAXIMUM TOTAL LINEAR LENGTH OF THE FOLLOWING PIPE LINES SHALL BE 60 FEET: 1R133A, 1RE83B, 1R183C & 1R1101A
6. MAXIMUM LINEAR LENGTH OF THE PIPE 1R141A SHALL BE 30 FT MAXIMUM LINEAR LENGTH OF PIPES 1R139A AND 1R140A SHALL BE 6 FEET EACH.
7. PIPE LINES 1R141A, 1R140A AND 1R139A SHALL SLOPE DOWN CONTINUOUSLY TOWARDS GLAND SEAL SYSTEM AIR DISCHARGE FLANGE
8. RUPTURE DISC VENT TO BE DIRECTED TOWARD CEILING.
9. TURBINE EXHAUST LINE 1R108A SHALL BE ARRANGED TO PROVIDE CONTINUOUS DOWNWARD DRAINAGE FROM UPSTREAM SIDE OF CHECK VALVE 1E51F040 TO THE TURBINE EXHAUST DRAIN POT, AND DOWNSTREAM OF CHECK VALVE TO THE SUPPRESSION POOL.
10. STEAM SUPPLY LINE 1R104A SHALL BE ARRANGED TO PROVIDE A CONTINUOUS DOWNWARD DRAINAGE FROM THE MAIN STEAM SUPPLY LINE TO THE DRAIN POT

FIELD NOTES:

1. TEMPORARY IN LINE STRAINER (CONICAL TYPE) AND DIFFERENTIAL PRESSURE GAUGE AS SHOWN INSTALLED DURING PRE-OP AND INITIAL START-UP TESTING ONLY. REMOVE FOR NORMAL PLANT OPERATION, AND CAP AND WELD AS SHOWN. (SEE S & L STD. MP. 270.9.1)
2. FOR RCIC LOGIC SEE G.E. DWG. 828E306.
3. # FURNISHED WITH ASSOCIATED EQUIPMENT.
4. INDICATED ORIFICE SIZES ARE FOR INITIAL START-UP AND TESTING ONLY. FOR NORMAL OPERATION ADJUST AS REQUIRED TO MEET THE HYDRAULIC REQUIREMENTS OF THE SYSTEM. (SEE G.E. DWG 762E421A)
5. SPOOL PIECE FOR TEMPORARY INLINE STRAINER FOR PRE-OP AND INITIAL START UP TESTING ONLY. REMOVE STRAINER FOR NORMAL PLANT OPERATION.
6. SPOOL PIECE FOR FLUSH PIPING BY-PASS.
7. BLIND FLANGE FOR HYDROSTATIC PRESSURE TEST ONLY REMOVE FOR NORMAL PLANT OPERATION.
8. LOCATE TE-1E31-N016E2 BELOW AND AS CLOSE TO THE REFUELING BULKHEAD AS POSSIBLE
9. TE-1E31-N016E2 IS ABANDONED IN PLACE.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

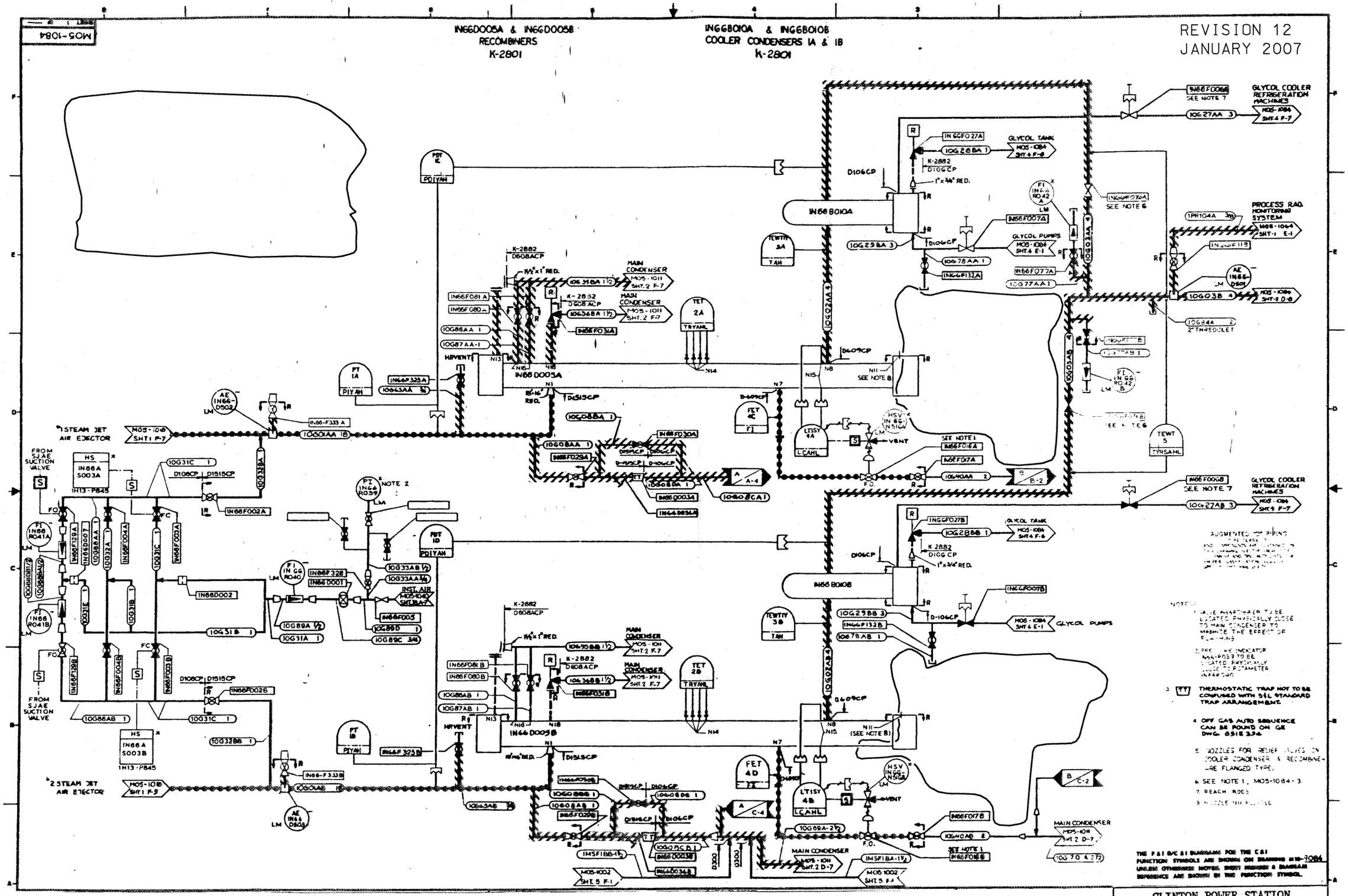
FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S
REACTOR CORE ISOLATION COOLING
SHEET 73 OF 111

M05-1084

IN66D005A & IN66D005B
RECOMBINERS
K-2801

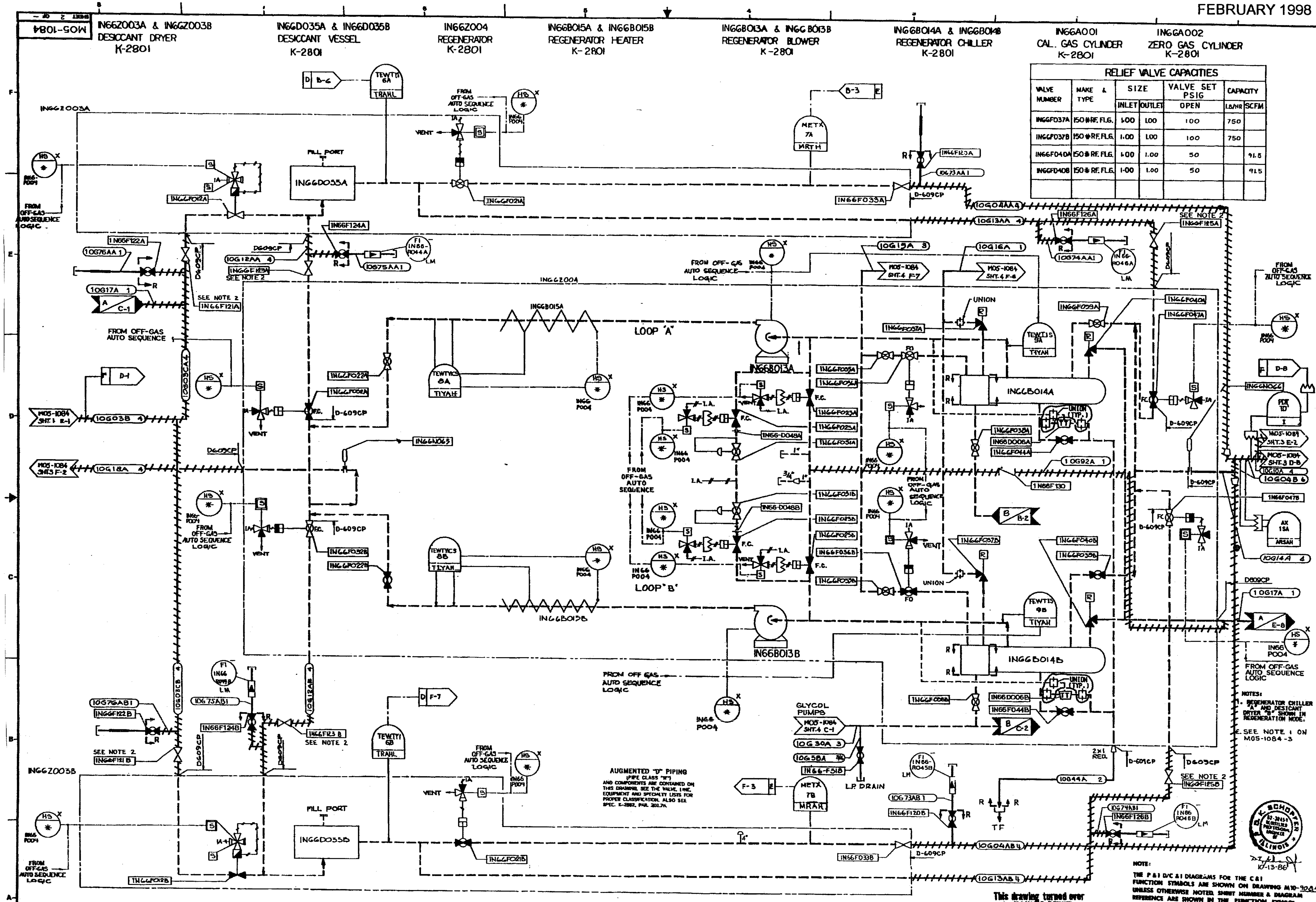
IN66B010A & IN66B010B
COOLER CONDENSERS 1A & 1B
K-2801

REVISION 12
JANUARY 2007



CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
OFF - GAS
SHEET 74 OF 111

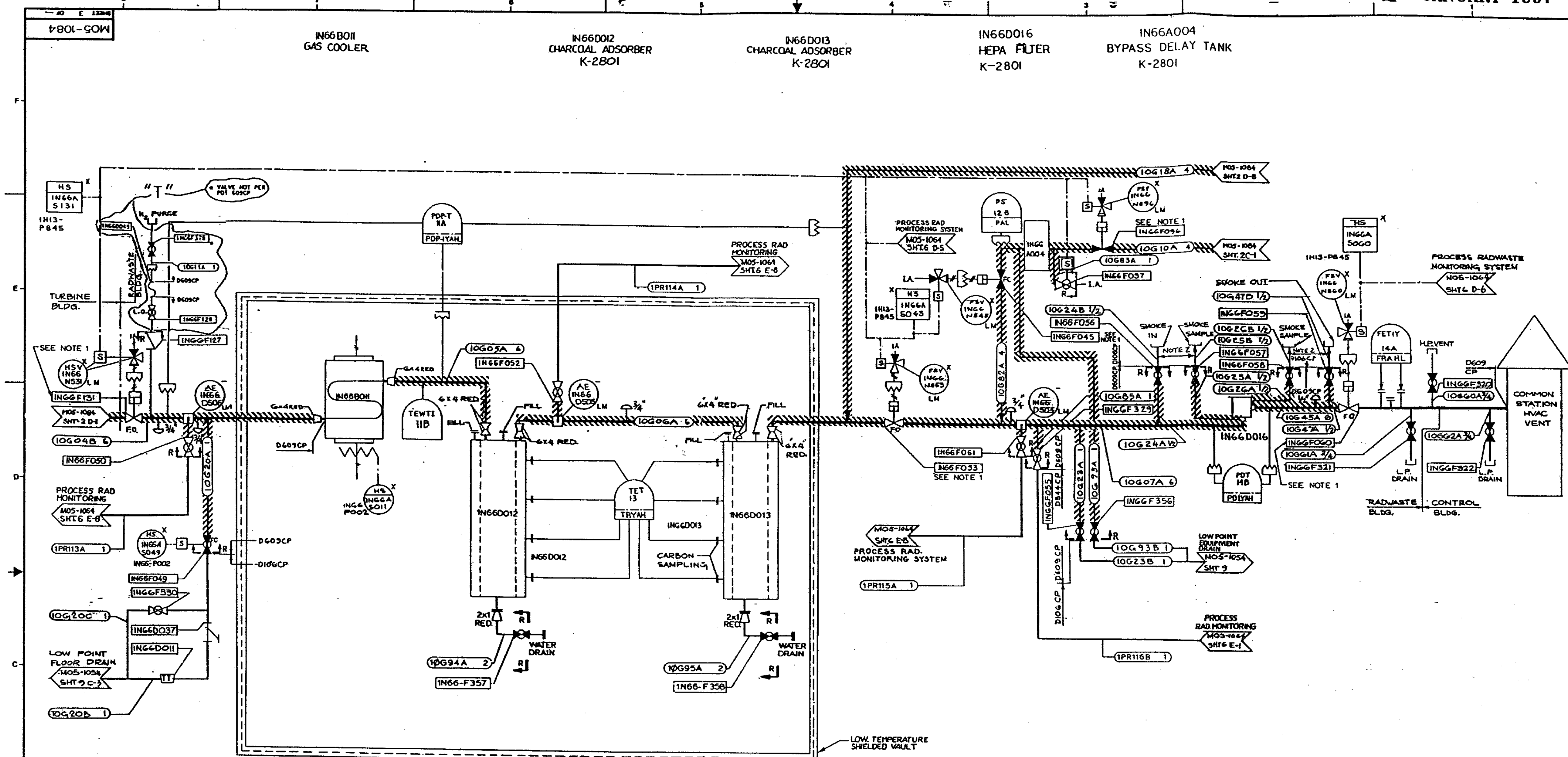


RELIEF VALVE CAPACITIES

VALVE NUMBER	MAKE & TYPE	SIZE INLET	SIZE OUTLET	VALVE SET PSIG OPEN	CAPACITY LB/HR	CAPACITY SCFM
IN66F037A	150#RF. FLG.	1.00	1.00	100	750	
IN66F037B	150#RF.FLG.	1.00	1.00	100	750	
IN66F040A	150# RF. FLG.	1.00	1.00	50		91.5
IN66F040B	150# RF. FLG.	1.00	1.00	50		91.5

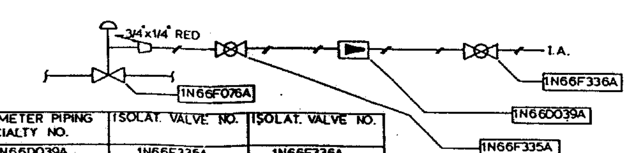
CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
OFF - GAS
SHEET 75 OF 111



NOTE: 1 THE FOLLOWING OFF-GAS VALVES REQUIRE PRESSURIZATION, WITH INSTRUMENT AIR, OF THE DOUBLE PACKING LEAK-OFF CONNECTION:

TYPICAL PRESSURIZATION OF VALVE PACKING



CONTROL VALVE NO.	ROTAMETER PIPING SPECIALTY NO.	ISOLAT. VALVE NO.	ISOLAT. VALVE NO.
1N66F076A	1N66D039A	1N66F335A	1N66F336A
1N66F076B	1N66D039B	1N66F335B	1N66F336B
1N66F121A	1N66D040A	1N66F337A	1N66F338A
1N66F121B	1N66D040B	1N66F337B	1N66F338B
1N66F123A	1N66D041A	1N66F339A	1N66F340A
1N66F123B	1N66D041B	1N66F339B	1N66F340B
1N66F125A	1N66D042A	1N66F341A	1N66F342A
1N66F125B	1N66D042B	1N66F341B	1N66F342B
1N66F045	1N66D043	1N66F343	1N66F344
1N66F096	1N66D044	1N66F345	1N66F346
1N66F131	1N66D045	1N66F347	1N66F348
1N66F053	1N66D046	1N66F349	1N66F350
1N66F060	1N66D047	1N66F351	1N66F352

NOTES CONT.

2. PROVIDE PROTECTIVE DUST COVER OR PLUGGED ML4-K26 HANSEN PLUG.

AUGMENTED "D" PIPING (PIPE CLASS "R") AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE, EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2882, PAR. 201.7a.

NOTE:

THE P&I D/C &I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9084 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
OFF - GAS
SHEET 76 OF 111

M05-1086

IWF13A
HEATER VENT
GAS COOLER
K-2859

IWF07A
HEATER
K-2859

IWF06P
RECIRC. PUMP
K-2859

IWF08D
VAPOR BODY
K-2859

IWF12PA & IWF12PB
& 1 FLOOR DRAIN EVAPORATOR
BOTTOMS PUMP
K-2859

NOTE:
1. SUPPLIED BY K-2859 AND INSTALLED BY K-2882
2. DENOTES "CAMFLEX" VALVE WITH DIAPHRAGM OPERATOR
3. DENOTES RAM TYPE VALVE FOR DETAIL OF THE OPERATOR ASSEMBLY SEE M05-1085 SHT. 1.
4 CAPS SHOULD BE INSTALLED A MAX. OF 2 IN. FROM VALVE OR LINE.

RETIRED IN PLACE

FROM ITE-WF071 — M05-1086-3
FROM ITE-WF054 — M05-1086-4
FROM ITE-WF060 — M05-1086-4
FROM ITE-WF068 — M05-1086-4

TO RADWASTE BLDG. EQUIP. DRAIN TANK M05-1053 SHT 6 E-3

TO ITI WF010 M05-1086-3

TO ITR-WF004 M05-1086-4

TO ITR WF004 M05-1086-4

CONCENTRATE WASTE TANK M05-1093 SHT. 4 E-8

WASTE MIXING TANK M05-1089 SHT 6 E-7

ABANDON IN PLACE

CHEM. WASTE COLL TANK

CHEM. WASTE COLL TANK

TO CHEM. WASTE COLL. TANK M05-1054 SHT 19 D-4

PROCESS SAMPLE PANEL OPL 33 JA
M05-1045 SHT. 1 F-5 PT: IRIS
M05-1045 SHT. 1 A-2 FLUSH LINE

RADWASTE EVAP. HEADER M05-1086 SHT 2 A-5

TO CHEM. WASTE COLL. TANK M05-1054 SHT 19 C-3

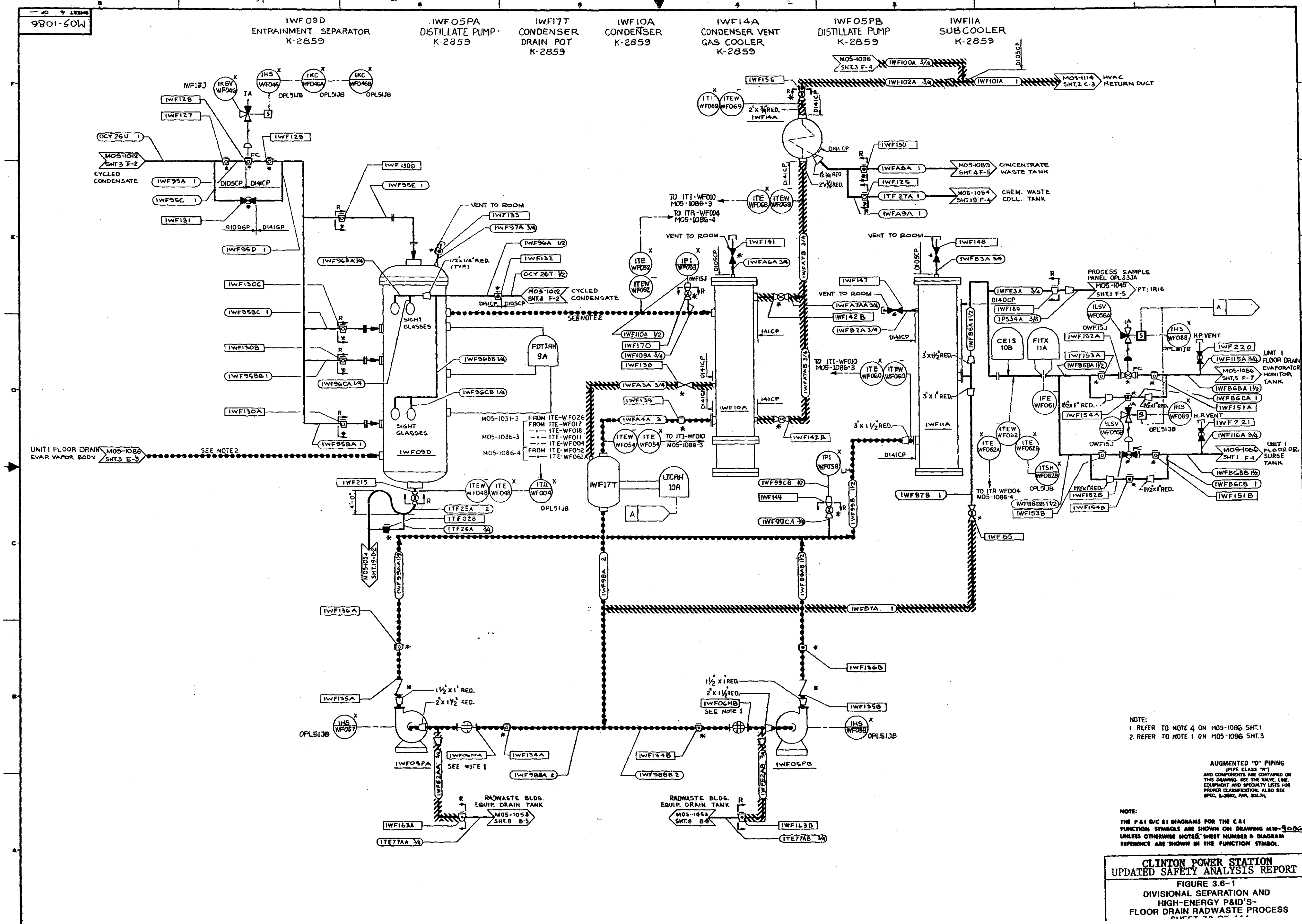
AUGMENTED "D" PIPING
(PIPE CLASS "DE")
AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE, EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2082, PAR. 301.7a.

NOTE:
THE P&I D/C &I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1086 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
FLOOR DRAIN RADWASTE PROCESS
SHEET 77 OF 111

REV. 2 SEPT. 1990



CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
FLOOR DRAIN RADWASTE PROCESS

0WZ13A
HEATER VENT
GAS COOLER
K-2859

0WZ07A
HEATER
K-2859

0WZ06P
RECIRC. PUMP
K-2859

HVAC RETURN DUCT
M05-1087 SHT.3 F2

0WZ100A ¾

0WZ090

OTI WZ072 LM

OTEW WZ072

2"x ¾" RED.

D105CP

0WZ13A

1"x ¾" RED.

2"x 1" RED.

0WZ78A 1

D100CP

OTE 70A 1

RAD. WASTE EQUIP. DRAIN TANK
M05-1053 SHT.6 E-5

0WZ088

OTI-WZ010
M05-1087 SHT.4 D-4

OTE WZ071

OTEW WZ071

0WZ087

0WZ124

0WZ94A ¾

0WZ086

0WZ03H

0WZ76A 1

D105CP

0WZ07A

PITR M10-1031 12 B

D105CP

0WZ77A 1

OTR-WZ004
M05-1087 SHT.3 C-5

OTE WZ018

OTEW WZ018

OTEW WZ017

OTE WZ017

OTR-WZ004
M05-1087 SHT. 3 C-5

0WZ103AA

0WZ211B

SEE NOTE 1
M05-1087 SHT.4 D-8

0WZ103B ½

OPI WZ020

0WZ15J

0WZ104AA

0WZ211A

OPI WZ019

0WZ15J

0WZ104B ½

0WZ73AA 2

0WZ74A 1½

0WZ084

0CY47M 1½

CYCLED CONDENSATE
M05-1012 SHT. 5 C-6

D105CP D151CP

D150CP D151CP

CHEM. WASTE COLL. TANK
M05-1054 SHT.19 C-8

1TF33A 2

0WZ083

0WZ73B 2

0WZ082B

0WZ082A

0WZ73AB 2

0WZ110B

0CY47P ¾

CYCLED CONDENSATE
M05-1012 SHT.5 C-6

0WZ106B

0WZ105B

0AS25AB ¾

AUX. STEAM
M05-1031 SHT.4 F-5

0WZ83BB ¾

I.A.

FIP

0WZ83AB ¾

D100CP

D105CP D151CP

M05-1087 SHT.4 D-8

0WZ144

0WZF5A 1

0WZ107B

0WZ83C ¾

0WZ108B

1"x ½" RED.

DETR 5A

0WZD3AA ½

0WZC3A 1

0WZ146

0WZD3BA ½

0WZC3B ¾

0WZ145

D151CP

TF

R

0WZ06P

FIGSHLA 11C

M05-1087 SHT.4 C-7

SEE NOTE 1

0WZ81H 1½

0WZ101

0WZ81F 1

S

0WZ100

0WZ099

1½" x 1" RED.

1½" x 1" RED.

0WZ81D 1½

0WZ81A 1½

0WZ160

0WZC5A ¾

0WZ102

0WZ81G 1½

FITC 3

CEI 9

OHS WZ001

OPL51JA

DASF WZ001

0WZ15J

I.A.

S

OFE WZ003

OHS WZ036

OPL51JA

OTEW WZ004

OTE WZ004

OTR-WZ004
M05-1087 SHT. 3 C-5

1½" x 1" REDS.

0WZ095

0WZ81C 1

AIT 2

O2L WZ001

OPL-08J

0WZ092

0WZ01A 1½

RADWASTE EVAP. HEADER
M05-J086 SHT. 2: A-4

0WZC4A ¾

0WZ159

0TF80A ¾

CHEM. WASTE COLL. TANK
M05-1087 SH.3 C-4

0WZ094

0WZ093

0WZ137

OHSV WZ035

0WZ-19J

OHS WZ035

OPL51JA

I.A.

I.A.

SEE NOTE 1

0WZ143

D151CP

MO

AIR

X¾"6 RED.

OHSV WZ154A

0WZ19J

IA

S

OHS-WZ154
M05-1045 SHT. 1

IA

OHSV WZ154B

0WZ19J

CHEM. WASTE COLL. TANK
M05-1054 SHT.19 C-8

1TF34A 1½

FLUSH LINE
M05-1093 SHT 1

0PS22A

PROCESS SAMPLE PANEL 0PL33JA
M05-1045 SHT. 1 F-3

0PS42A

FT. OR12

NOTE:
1. SUPPLIED BY K-2859 AND INSTALLED BY K-2882.
2. D DENOTES "CAMFLEX" VALVE
3. DENOTES RAM TYPE VALVE. FOR DETAIL OF THE OPERATOR ASSEMBLY SEE M05-1085 SHT. 1

AUGMENTED "D" PIPING
(PIPE CLASS "R")
AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE, EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2882, PAR. 201.7.4.

NOTE
THE P&I D/C&I DIAGRAMS FOR THE C&I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-1087 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
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FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
CHEM. RAD. REPROCESSING & DISP. RAD. EVAP.
SHEET 79 OF 111

M05-1087 SHEET 3 OF —

OWZ09D ENTRAINMENT SEPARATOR K-2859

OWZ05PA DISTILLATE PUMP K-2859

OWZ17T CONDENSER DRAIN POT K-2859

OWZ10A CONDENSER K-2859

OWZ14A CONDENSER VENT GAS COOLER K-2859

OWZ05PB DISTILLATE PUMP K-2859

OWZ11A SUBCOOLER K-2859

CYCLED CONDENSATE

CHEMICAL WASTE EVAP. VAPOR BODY

SEE NOTE 2

SEE NOTE 1

SIGHT GLASSES

RADWASTE BLDG. EQUIP. DRAIN TANK

HVAC RETURN DUCT

CONCENTRATE WASTE TANK

CHEM. WASTE COLL. TANK

EVAPORATOR MONITOR TANK

CHEM. WASTE COLLECTOR TANK

TO OTR-WZ004 M05-1087 SHT 3

TO OTI-WZ010 M05-1087-4

TO OTR-WZ004 M05-1087-3

FROM
M05-1031-3 OTE-WZ026
M05-1087-2 OTE-WZ017
M05-1087-2 OTE-WZ018
M05-1087-4 OTE-WZ011
M05-1087-2 OTE-WZ004
M05-1087-3 OTE-WZ052
OTE-WZ062A

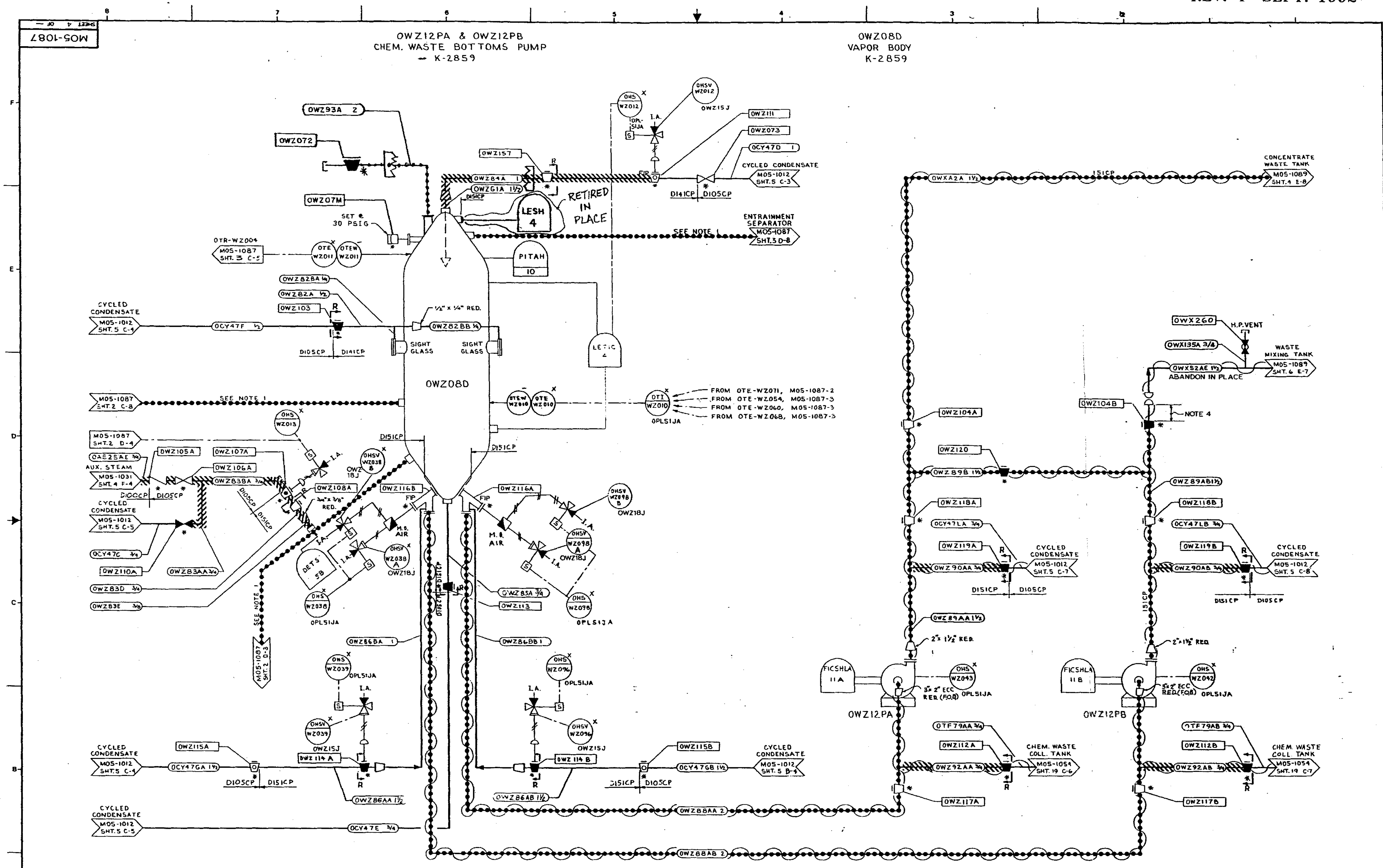
NOTES:
1. REFER TO NOTE 3 ON M05-1087 SHT. 1
2. REFER TO NOTE 1 ON M05-1087 SHT. 2

AUGMENTED "D" PIPING
(PIPE CLASS "R"; AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE, EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2882, PAR. 201.7n.

NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9087 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
CHEM. RAD. REPROCESSING & DISP. RAD. EVAP.
SHEET 80 OF 111



NOTE:

1. SUPPLIED BY K-2859 AND INSTALLED BY K-2882
2. DENOTES "CAMFLEX" VALVE
3. DENOTES RAM TYPE VALVE. FOR DETAIL OF THE OPERATOR ASSEMBLY SEE M05-1085 SHT. 1
4. CAPS SHOULD BE INSTALLED A MAX. OF 2 IN. FROM VALVE OR LINE.

AUGMENTED "D" PIPING (PIPE CLASS "R") AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE, EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2882, PAR. 201.7n.

NOTE

THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9097 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

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UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND HIGH-ENERGY P&ID'S-
CHEM. RAD. REPROCESSING & DISP. RAD. EVAP.
SHEET 81 OF 111

REVISION 8
JULY 1998

MO5-1089

OWX36SA & OWX36SB
CONCENTRATE WASTE
TANK AGITATOR MOTOR
K-2882

OWX01TA
CONCENTRATE WASTE
TANK
5000 GAL.
K-2839

OWX01PA
CONCENTRATE WASTE
TANK PUMP
75 GPM
K-2825

OWX01D
CONCENTRATE WASTE TANK
VENT COOLER
K-2859

OWX01TB
CONCENTRATE WASTE
TANK
5000 GAL
K-2839

OWX01PB
CONCENTRATE WASTE
TANK PUMP
75 GPM
K-2825

RETIRE IN PLACE

CHEM WASTE EVAP BOTTOM M05-1087 SHT.4 F-1

#1 FLOOR DRAIN EVAP. BOTTOM M05-1056 SHT.3 D-1

#2 FLOOR DRAIN EVAP. BOTTOM M05-2086 SHT.2 D-1

WASTE MIXING TANK SLUDGE PUMP-A M05-1089 SHT 6 C-8

ABANDON IN PLACE

*2 FL. DR. EVAP. COND. VENT GAS COOLER DRAIN M05-2086 SHT.4 E-3

CHEM. WASTE EVAP. COND. VENT GAS COOLER DRAIN M05-1087 SHT.3 E-3

*1 FL. DR. EVAP. COND. VENT GAS COOLER DRAIN M05-1086 SHT.4 F-3

HVAC SYSTEM M05-1114 SH2 A-3

SLOPE

TANK SELECTOR

WX LOGIC

CYCLED CONDENSATE M05-1012 SHT. 3 D-1

CYCLED CONDENSATE M05-1012 SHT. 3 C-1

CYCLED CONDENSATE M05-1012 SHT. 8 C-1

MOBILE SOLIDIFICATION STATION M05-1089 SHT.1 D-1

ABANDON IN PLACE WASTE MIXING TANK M05-1089 SHT.6 F-7

SEE NOTE 4

SEE NOTE 3

TO CHEM. WASTE COLLECTOR TANK M05-1054 SHT.19 F-3

TO CHEM. WASTE COLLECTOR TANK M05-1054 SHT.19 F-2

WASTE MIXING TANK SLUDGE PUMP B M05-1089 SHT.6 C-2

#1 CHEM. WASTE COLL. TANK M05-1087 SHT. 1 F-4

2CHEM. WASTE COLL. TANK M05-2087 SHT 1 F-4

OHSV-WX301 M05-1045 SHT.3 D-1

OHSV-WX301 M05-1045 SHT.3 D-1

FLUSH LINE M05-1045 SHT.3 F2

SAMPLE PANEL OPL33JC PT OR 11A M05-1045 SHT.3 F4

OHSV-WX302 M05-1045 SHT.3 E-1

OHSV-WX302 M05-1045 SHT.3 E-1

FLUSH LINE M05-1045 SHT.3 F2

SAMPLE PANEL OPL33JC PT OR 11B M05-1045 SHT.3 F4

ENGINEERING NOTES:

2. FOR PLUG VALVE OPERATOR ASSEMBLY DETAIL SEE M05-1085 SHEET 1

3. PIPE CAP SHOULD BE INSTALLED WITH MINIMUM DISTANCE TO SHIELD WALL

4. CAPS SHOULD BE INSTALLED A MAXIMUM OF 2 IN. FROM VALVE OR LINE.

AUGMENTED "D" PIPING
(PIPE CLASS "P1")
AND COMPONENTS ARE CONTAINED ON THIS DRAWING. SEE THE VALVE, LINE EQUIPMENT AND SPECIALTY LISTS FOR PROPER CLASSIFICATION. ALSO SEE SPEC. K-2882, PAR. 201.7a.

NOTE:
THE P & I D/C & I DIAGRAMS FOR THE C & I FUNCTION SYMBOLS ARE SHOWN ON DRAWING M10-9089 UNLESS OTHERWISE NOTED. SHEET NUMBER & DIAGRAM REFERENCE ARE SHOWN IN THE FUNCTION SYMBOL.

CLINTON POWER STATION
UPDATED SAFETY ANALYSIS REPORT

FIGURE 3.6-1
DIVISIONAL SEPARATION AND
HIGH-ENERGY P&ID'S-
RADWASTE SLUDGE PROCESS
CONCENTRATE TANK
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